

What is claimed is:

1. A heat dissipation module with twin centrifugal fans, comprising:

a honeycomb panel disposed on a front surface of the heat dissipation module;

5 a first fan having an first outlet coupling to an inner surface of the honeycomb,  
and the first fan sucking a part of hot air generated by an electrical equipment and  
exhausting the part of the hot air out of the heat dissipation module by way of the first  
outlet and the honeycomb panel;

10 an air duct coupling to the inner side of the honeycomb panel and on a top of the  
first fan;

a second fan having a second outlet coupling to a rear side of the air duct, and  
the second fan sucking another part of the hot air generated by the electrical equipment  
and exhausting part of the hot air out of the heat dissipation module by way of the  
second outlet, the air duct and the honeycomb panel; and

15 a plurality of sliding rails disposed on both sides of the first fan and the second  
fan, the sliding rails providing the heat dissipation module with an ability to slide and  
couple to the electrical equipment while the heat dissipation module is being inserted  
into the electrical equipment.

20 2. The heat dissipation module with twin centrifugal fans as described in claim 1,  
wherein the electrical equipment further comprises a plurality of corresponding rails  
for coupling with the sliding rails of the heat dissipation module.

25 3. The heat dissipation module with twin centrifugal fans as described in claim 2,  
wherein the electrical equipment is a computer server system.

4. The heat dissipation module with twin centrifugal fans as described in claim 1,  
wherein the heat dissipation module further comprises a locking device to fix to the  
electrical equipment after the heat dissipation module is installed in the electrical  
5 equipment.

5. The heat dissipation module with twin centrifugal fans as described in claim 4,  
wherein the locking device is a locking screw.

10 6. The heat dissipation module with twin centrifugal fans as described in claim 1,  
wherein the heat dissipation module further comprises a temperature-detecting device  
for controlling rotational speeds of the first fan and the second fan.

15 7. The heat dissipation module with twin centrifugal fans as described in claim 1,  
wherein the heat dissipation module further comprises a spring device for absorbing  
vibrations caused by the first fan and the second fan and removing an electromagnetic  
wave.

20 8. The heat dissipation module with twin centrifugal fans as described in claim 1,  
wherein the heat dissipation module further comprises an upper cover and a bottom  
cover, wherein edges of the upper cover and the bottom cover are formed the sliding  
rails of the heat dissipation module and the upper cover and the bottom cover are  
utilized to couple with the first fan and the second fan.

25 9. A heat dissipation module with twin centrifugal fans utilized in a computer

server system, the heat dissipation module comprising:

a honeycomb panel disposed on a front surface of the heat dissipation module;

a first fan having a first outlet coupling to an inner surface of the honeycomb,  
and the first fan sucking a part of hot air generated by an electrical equipment and  
5 exhausting the part of the hot air out of the heat dissipation module by way of the first  
outlet and the honeycomb panel;

an air duct coupling to the inner side of the honeycomb panel and on a top of the  
first fan;

a second fan having a second outlet coupling to a rear side of the air duct, and the  
10 second fan sucking another part of the hot air generated by the electrical equipment  
and exhausting part of the hot air out of the heat dissipation module by way of the  
second outlet, the air duct and the honeycomb panel;

a plurality of sliding rails disposed on both sides of the first fan and the second  
fan, the sliding rails providing the heat dissipation module sliding and coupling to the  
15 electrical equipment while the heat dissipation module is being inserted into the  
electrical equipment;

a plurality of spring devices for absorbing vibrations caused by the first fan and  
the second fan and removing an electromagnetic wave; and

a temperature-detecting device for controlling rotational speeds of the first fan  
20 and the second fan.

10. The heat dissipation module with twin centrifugal fans as described in claim  
9, wherein the computer server system further comprises a plurality of corresponding  
rails for coupling with the sliding rails of the heat dissipation module.

25

11. The heat dissipation module with twin centrifugal fans as described in claim 9, wherein the heat dissipation module further comprises a locking device to fix to the computer server system after the heat dissipation module is installed in the computer server system.

5

12. The heat dissipation module with twin centrifugal fans as described in claim 11, wherein the locking device is a locking screw.

10 13. The heat dissipation module with twin centrifugal fans as described in claim 9, wherein the heat dissipation module further comprises an upper cover and a bottom cover, wherein edges of the upper cover and the bottom cover form the sliding rails of the heat dissipation module and the upper cover and the bottom cover are utilized to couple with the first fan and the second fan.

15 14. A computer server system, comprising:  
a server rack installing a plurality servers thereon;  
a plurality fixing slots disposed in a top portion of the server rack; and  
a plurality of heat dissipation modules with twin centrifugal fans disposed in the fixing slots, wherein each of the heat dissipation modules further comprises:

20 a honeycomb panel disposed on a front surface of the heat dissipation module;  
a first fan having a first outlet coupling to an inner surface of the honeycomb,  
and the first fan sucking a part of hot air generated by an electrical  
equipment and exhausting the part of the hot air out of the heat dissipation  
module by way of the first outlet and the honeycomb panel;

25 an air duct coupling to the inner side of the honeycomb panel and on a top of

the first fan;

a second fan having a second outlet coupling to a rear side of the air duct, and  
the second fan sucking another part of the hot air generated by the electrical  
equipment and exhausting part of the hot air out of the heat dissipation  
module by way of the second outlet, the air duct and the honeycomb panel;

a plurality of sliding rails disposed on both sides of the first fan and the second  
fan, the sliding rails providing the heat dissipation module with an ability to  
slide and couple with the electrical equipment while the heat dissipation  
module is being inserted into the electrical equipment;

a plurality of spring devices for absorbing vibrations caused by the first fan  
and the second fan and removing an electromagnetic wave; and

a temperature-detecting device for controlling rotational speeds of the first fan  
and the second fan.

15. The computer server system as described in claim 14, wherein each of the  
fixing slots further comprises a plurality of corresponding rails for coupling with the  
sliding rails of the heat dissipation module.

16. The computer server system as described in claim 15, wherein the heat  
dissipation module further comprises a locking device to fix to the computer server  
system after the heat dissipation module is installed in the computer server system.

17. The computer server system as described in claim 16, wherein the locking  
device is a locking screw.

18. The computer server system as described in claim 14, wherein the heat dissipation module further comprises an upper cover and a bottom cover, wherein edges of the upper cover and the bottom cover form the sliding rails of the heat dissipation module and the upper cover and the bottom cover are utilized to couple  
5 with the first fan and the second fan.